

CLAIMS

I claim:

1. A call center or office telephony asset for being managed over a network by a remote system, the asset comprising:

a memory storing an electronic identifier mappable to a network address;

a network connection adapted to communicate with a network; and

a network interface communicatively coupled to the network connection, the

network interface adapted to communicate over the network with the

remote system using the network address;

wherein the asset is at least one member selected from the group consisting

of: a headset, a component associated with a headset, and a device

adapted to operatively couple to a headset.

2. The asset of claim 1, wherein the asset comprises at least one member selected from the group consisting of: a headset, a headset adapter, an on-line indicator (OLI), and a handset lifter.

3. The asset of claim 1, wherein the asset comprises at least one member selected from the group consisting of: a headset adapter, an on-line indicator (OLI), and a handset lifter.

1 4. The asset of claim 1, wherein the electronic identifier is a Media Access
2 Control (MAC) address.

1 5. The asset of claim 1, wherein the network address is an IP address.

1 6. The asset of claim 1, wherein the network address is globally unique.

1 7. The asset of claim 1, wherein the network interface is adapted to
2 communicate over the network using the Internet Protocol.

1 8. A call center or office telephony asset assembly for being managed over a
2 network by a remote system, the assembly comprising:

3 an asset having an electronic identifier stored therein, the electronic identifier
4 mappable to a network address;

5 a network interface communicatively coupled to the asset and adapted to
6 communicatively couple with the remote system over a network using
7 the network address; and

8 a management module, the management module operatively coupled to the
9 asset for performing a management task thereon.

1 9. The assembly of claim 8, wherein the electronic identifier is a Media
2 Access Control (MAC) address.

1 10. The assembly of claim 8, wherein the network interface is adapted to
2 communicate over the network using the Internet Protocol.

1 11. The assembly of claim 8, wherein the asset is a headset or is adapted to
2 operatively couple to a headset.

1 12. A call center or office telephony asset assembly for being managed over a
2 network by a remote system, the assembly comprising:

3 an asset;

4 a proxy device operatively coupled to the asset, the proxy device having a
5 network interface adapted to assign a network address for the asset
6 and communicatively couple with the remote system over a network
7 using the network address; and

8 a management module, the management module operatively coupled to the
9 asset for performing a management task thereon.

1 13. The assembly of claim 12, wherein the asset is a headset or is adapted to
2 operatively couple to a headset.

1 14. The assembly of claim 12, wherein the asset has an electronic identifier,
2 and the network interface is adapted to determine the network address of the asset using
3 the asset's electronic identifier.

1 15. The assembly of claim 12, wherein the electronic identifier is a Media
2 Access Control (MAC) address.

1 16. The assembly of claim 13, wherein the management module is located in
2 the proxy device.

1 17. The assembly of claim 13, wherein the proxy device is a second call
2 center or office telephony asset.

1 18. The assembly of claim 13, wherein the network interface is adapted to
2 communicate over the network using the Internet Protocol.

1 19. A call center comprising:
2 a plurality of call center assets;
3 a plurality of network interfaces, each network interface associated with at
4 least one asset and adapted to communicate over a network for the
5 asset;
6 a central management system adapted to communicate with the network
7 interfaces over the network to perform at least one management task
8 related to the assets.

1 20. The assembly of claim 19, wherein each of the plurality of call center
2 assets is a headset or is adapted to operatively couple to a headset.

1 21. The call center of claim 19, wherein a network interface is associated
2 with two or more assets.

1 22. The call center of claim 19, wherein at least one of the assets comprises
2 the network interface associated therewith.

1 23. The call center of claim 19, further comprising at least one proxy device,
2 the proxy device comprising a network interface associated with at least one asset.

1 24. The call center of claim 19, wherein the management task comprises
2 tracking utilization of one or more assets.

1 25. The call center of claim 19, wherein the management task comprises
2 tracking the location of one or more assets.

1 26. The call center of claim 19, wherein the management task comprises
2 tracking diagnostic information regarding one or more assets.

1 27. The call center of claim 19, wherein the management task comprises
2 providing software or firmware updates for one or more assets.

1 28. A proxy device to facilitate the management of a call center or office
2 telephony asset by a remote system, comprising:
3 a network interface adapted to communicatively couple to the remote system
4 over a network, the network interface further adapted to assign an
5 identifier to the asset, the identifier being mappable to a globally
6 unique network address associated with the asset; and
7 a management module communicatively coupled to the network interface, the
8 management module adapted to facilitate a management task for the
9 asset in response to receiving a management instruction
10 communication from the remote system that is associated with the
11 asset's globally unique network address.

1 29. The device of claim 28, wherein the management module is adapted to
2 facilitate a management task management task by forwarding the management
3 instruction to the asset.

1 30. The device of claim 28, wherein the management module is adapted to
2 facilitate a management task management task by transmitting operational information
3 regarding the asset to the remote system.

1 31. A method of addressing a call center or office telephony asset on a
2 network, comprising:

3 determining a network address for the asset using an electronic identifier; and
4 using the network address to communicate with a remote system over a
5 network;
6 wherein the asset is selected from the group consisting of: a headset, an on-
7 line indicator (OLI), and a handset lifter.

1 32. The method of claim 31, wherein determining the network address
2 comprises using a Media Access Control (MAC) address associated with the asset.

1 33. A method of monitoring the utilization a call center or office telephony
2 asset, comprising:

3 establishing communication with the asset over a network using a network
4 address, the network address determined using an electronic identifier
5 associated with the asset;
6 transmitting a request to the asset over the network; and
7 receiving a response to the request from the asset, the response indicating the
8 utilization of the asset.

1 34. The method of claim 33, wherein the asset is a telephone and the response
2 indicates whether the telephone has an active call.

1 35. The method of claim 33, wherein transmitting comprises sending requests
2 to the asset at predetermined intervals.

1 36. The method of claim 33, wherein the asset comprises a headset and the
2 utilization includes whether the headset is coupled to a telephone line, the method
3 further comprising:

4 routing telephone calls to the telephone line if the headset's utilization
5 indicates that the headset is coupled to the telephone line, otherwise
6 routing telephone calls to another telephone line.

1 37. A method of determining the location of a call center or office telephony
2 asset, comprising:

3 establishing communication with the asset over a network using a network
4 address, the network address determined using an electronic identifier
5 associated with the asset;

6 transmitting a message to the asset over the network, the message passing
7 intermediate devices on the network;

8 receiving an echo message, the echo message including identification
9 information associated with the intermediate devices; and

10 determining the location of the asset using the identification information of
11 the intermediate devices.

1 38. A method of updating the software or firmware for one or more call
2 center or office telephony assets, comprising:

3 establishing communication with the asset over a network using a network
4 address, the network address determined using an electronic identifier
5 associated with the asset; and
6 transmitting a software or firmware update to the asset over the network.

1 39. The method of claim 38, further comprising:
2 querying the asset for version information for the asset's software or
3 firmware; and
4 receiving a response from the asset, the response indicating the version
5 information for the asset.

1 40. The method of claim 38, further comprising:
2 responsive to the version information's being different that the update, re-
3 transmitting the update to the asset over the network.

1 41. The method of claim 38, further comprising:
2 transmitting the update to a plurality of assets over the network.

1 42. The method of claim 41, wherein transmitting comprises broadcasting the
2 update to a multicast network address associated with the plurality of assets.